

## ABSTRACT OF THE DISCLOSURE

A particle size distribution analyzer is provided which is capable of analysis with improved precision by canceling noise superimposed on scattering light information obtained from a test sample containing test particles to be analyzed. The particle size distribution analyzer includes: a fundamental light guide mechanism (5) operative to divide fundamental light (L) irradiated from a single light source and then guide divided fundamental lights (La and Lb) to the reference sample (RS) used as a reference and the test sample (OS), respectively; a scattering light guide mechanism (7) for guiding scattering lights (LN<sub>a</sub> and LN<sub>b</sub>) caused by irradiation of the samples (RS and OS) with the respective divided fundamental lights (La and Lb) to a light intensity detecting section (6) configured to detect the intensity of light; and an information processing section (8) for calculating a particle size distribution of the group of test particles contained in the test sample (OS) based either on a difference between fluctuations of the intensities of the respective scattering lights (LN<sub>a</sub> and LN<sub>b</sub>) detected by the light intensity detecting section (6) or on a difference between information items computed from the respective fluctuations.